

**From:** [Moore, Gary](#)  
**To:** [Wright, Jeff](#)  
**Cc:** [Bordelon, David](#)  
**Subject:** RE: Delta Shipyards  
**Date:** Thursday, February 21, 2013 9:09:39 PM

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Jeff:

I have reviewed the informaton below and have the following questions:

Option 1: Are the samples in the buckets representative samples of the pits? Based upon your statements, I would appear that they are not. I know I have asked this of you before but do we have discrete samples from each pit?

Option 2: How would the long reach track hoe get us representative samples from the pits? The only way I know to get a representative sample is by sludge judge/geoprobe of the entire depth of the pit at various locations by composite. We tried that and could not get appropriate recovery. How would we do this?

Option 3: I don't really care to do a in-field treatability study in this manner.

My preference is Option 2 but not with a trac hoe unless we can get a full profile of the materials from each pit separately with each pit being its own treatability study unless we can somehow do one treatability sample to cover all the pits. I would like to get samples for TCLP and maybe SPLP of the waste in conjunction with option 2.

On the cleanup side, we could break the walls between the pits and pull in the walls and create one large pit which would soak up the water and also make sure that any contaminated soils were included in the pits prior to the solidification activity.

Chew on this with your guys and let me know your recommendation.

Thanks  
Gary

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**From:** Wright, Jeff [Jeff.Wright@WestonSolutions.com]  
**Sent:** Thursday, February 21, 2013 5:05 PM  
**To:** Moore, Gary  
**Cc:** Bordelon, David  
**Subject:** RE: Delta Shipyards

Gary –

Given our initial site assessment data we do believe that it would be most beneficial to determine whether soil stabilization/solidification is a viable option. After talking with some soil remediation personnel, David and I have come up with three options for you to consider at Delta Shipyards.

**Option 1 – Use existing samples for Treatability Study analysis:**

Pros – This would not require remobilization to the site or incur any additional site related costs.

Cons – Samples were residual geoprobe cuttings collected from the four corners of each pit. The samples are also 6 months old and likely will not be representative of the moisture and oil & grease content as samples collected from areas closer to the middle of each pit.

Cost Associated with Option 1 includes:

Treatability Test Proposal (from subcontract lab)



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	- \$700	
	Work Plan	20
Hrs	- \$2,280	
	Subcontract Lab, Treatability Test Coordination	20
Hrs	- \$2,280	
	Conduct Treatability Test	
	- \$25,000 (estimate)	
	Treatability Test Review	24
Hrs	- \$2,736	
	Compile Final Report	50
Hrs	- \$5,700	
	QC Review	12
Hrs	- \$1,700	
		Estimate
Total	- \$40,396	

### **Option 2 – Mobilize Extended reach Track hoe to collect representative samples from each pit:**

Pros – This would provide a much better representative sample from each pit. Treatability analysis results would be closer to real field applications.

Cons – This would require incurring additional costs to mobilize personnel and equipment to the field. However, we estimate that this effort would only take one day in the field.

Cost Associated with Option 2 includes:

	Subcontract Equipment, Amend H&P and conduct Field activities (2 people)	30
Hrs (total)	- \$3,250	
	Extended reach Track hoe rental and Operator	
	- \$5,000	
	Completion of Option 2 would require all elements and associated cost of Option	
1	- \$40,396	
Estimate Total	- \$48,646	

### **Option 3 – Conduct Small Scale Field Treatability Tests and then submit representative pit samples to Treatability Lab for analysis. Small tests pit would be created within the bermed area of each pit. Solidification reagents would be added and allowed to cure for 3-, 5- and 7-days. A pocket penetrometer would be used to field test approximate UCS. Results of the field tests would be provided to the Treatability lab to assist with reagent formulation.**

Pros – This scenario may provide the lab with an idea of the ratio and amount of materials to use for solidification. Field tests would be a true test of the process in real world (“as is”) conditions and may provide some insight that would be of benefit during removal activities.

Cons – In many soil solidification projects, the freestanding top water is removed (dewatered) and the remaining water/moisture content is used in the solidification process. If you mix the reagents into materials with high water content, the percentage needed to set quickly is a lot higher. You would tend to see this effect in bench scale testing of fresh sediments. As such the field tests conducted on materials that were not dewatered may likely yield results that show more solidification reagents are needed than actually

required.

Cost Associated with Option 3 includes:

Subcontract Equipment and solidification reagents, Amend H&P and conduct Field activities (2 people) 54 Hrs (total) - \$5,820

Extended reach Track hoe rental and

Operator

- \$5,000

Reagent materials

- \$1,500

Completion of Option 2 would require all elements and associated cost of Option 1

- \$40,396

Estimate Total - \$52,716

Let me know what you think.

Thanks,



**Jeff Wright, CHMM**

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**From:** Moore, Gary [mailto:moore.gary@epa.gov]

**Sent:** Tuesday, February 19, 2013 5:29 PM

**To:** Wright, Jeff

**Subject:** Re: Delta Shipyards

What do you think about the recharge rate out at delta? Do we have everything we need to do the study?

I can extend the TDD and add scope changes as necessary. What changes and estimated costs are we talking about?

Gary

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**From:** Wright, Jeff  
**Sent:** Tuesday, February 19, 2013 4:35:18 PM  
**To:** Moore, Gary  
**Subject:** Delta Shipyards

Gary –

I spoke with John Halk today. They did not use any type of slurry wall during the Bayou Trepagnier site solidification project. They simply mixed in place. He did mention that the groundwater recharge rate was fairly slow due to the amount of clay in the area. He also mentioned that he is not aware of any LDEQ groundwater data for that area. USGS well data for that area does indicate groundwater at approximately 4 ft bgs.

As I'm sure you're aware, the TDD due date is still 3/4/13. I think there is about \$6900 left. What are your plans going forward? Are you thinking of closing this TDD and opening another? Would you want to close with an AOC and carry over all info into another TDD or would you want a full report? Just to let you know, I have not been proceeding with compiling the final report as I thought all the Treatability information would need to be included. Honestly I've tried to charge as few hours as possible until the whole Treatability issue was resolved.



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